

CLAIMS

What is claimed is:

5 1. An optically transmissive film, the film comprising a first surface and a second surface and a first edge and a second edge; and

10 a plurality of optical structures formed in the first surface, the plurality of optical structures being arranged on the first surface in a pattern, and wherein each optical structure has at least one characteristic selected from the group consisting of an amplitude, a period and an aspect ratio, and wherein the characteristic has a first value for a first
15 predetermined location on the film between the first edge and the second edge and the characteristic has a second value, different from the first value, for a second predetermined location on the film, different than the first predetermined location on the film, between the
20 first edge and the second edge.

25 2. The optical element of claim 1, wherein the characteristic is decreased in intensity from the first predetermined location at the second predetermined location.

112
amplitude of
what?
period of
what?

3. The optical element of claim 1, wherein the first predetermined location is substantially adjacent the first edge.

5 4. The optical element of claim 1, wherein the characteristic has a maximum value at the first predetermined location and a minimum value at the second predetermined location.

10 5. The optical element of claim 1, wherein each optical structure comprises a discrete optical formation within the first surface.

15 6. The optical element of claim 5, wherein the discrete optical formation comprises a formation selected from the group comprising a prism, a line, a square, a dot and an ellipse.

20 7. The optical element of claim 1, further comprising a lens formed in the first surface and wherein the plurality of optical structures are formed in the lens.

25 8. The optical element of claim 7, wherein the lens comprises a lens selected from the group of lens consisting of a linear Fresnel lens, a circular Fresnel lens and a lenticular lens.

9. The optical element of claim 1, each optical structure having a substantially similar configuration to each other optical structure.

5 10. The optical element of claim 1, the optical structures further being uniformly distributed within the pattern.

10 11. The optical element of claim 1, wherein the plurality of optical structures produce a first optical effect at the first predetermined location and produce a second optical effect, different than the first optical effect, at the second predetermined location.

15 12. An optical element comprising:

an optically transmissive film, the film having a first surface and a second surface and a first edge and a second edge; and

20 a plurality of optical structures formed in the first surface, the plurality of optical structures being arranged on the first surface in a predetermined pattern, and wherein each optical structure has at least one characteristic selected from the group consisting of an amplitude, a period and an aspect ratio, and wherein the
25 characteristic has a first value for a first predetermined location on the film between the first edge and the second edge and the characteristic has a second value, different from the first value, for a second

predetermined location on the film, different than the first predetermined location on the film, between the first edge and the second edge;

5 a lightguide having an input surface and an output surface; and

the film being coupled to one of the input surface and the output surface of the lightguide.

10 13. The optical element of claim 12, wherein the lightguide comprises one of a wedge, a pseudo-wedge, a slab and a hollow body.

15 14. The optical element of claim 12, wherein the lightguide operates by frustrated total internal reflection.

15 15. The optical element of claim 12, wherein the lightguide operates by diffuse extraction.

20 16. The optical element of claim 12, wherein the characteristic is decreased in intensity from the first predetermined location at the second predetermined location.

25 17. The optical element of claim 12, wherein the first predetermined location is substantially adjacent the first edge.

18. The optical element of claim 17, wherein the optical structures are configured to provide diffusion.

5 19. The optical element of claim 12, wherein the characteristic has a maximum value at the first predetermined location and a minimum value at the second predetermined location.

10 20. The optical element of claim 12, wherein each optical structure comprises a discrete optical formation within the first surface.

15 21. The optical element of claim 20, wherein the plurality of optical structures are arranged to provide diffuse extraction of light from the light guide.

22. The optical element of claim 12, wherein the optically transmissive film is bonded to the lightguide.

20 23. The optical element of claim 12, wherein the optically transmissive film is adhesively bonded to the lightguide.

24. An optical element comprising:

a first surface and a second surface and a first edge and a second edge; and

a plurality of optical structures formed in the first surface, the plurality of optical structures being arranged on the first surface in a predetermined pattern, and wherein each optical structure has at least one characteristic selected from the group consisting of an amplitude, a period and an aspect ratio, and wherein the characteristic has a first value for a first predetermined location on the first surface between the first edge and the second edge and the characteristic has a second value, different from the first value, for a second predetermined location on the first surface, different than the first predetermined location on the first surface, between the first edge and the second edge.

25. The optical element of claim 24 comprising an optically transmissive film.

26. The optical element of claim 24 comprising an optically transmissive wedge.

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27. The optical element of claim 24, further comprising a plurality of optical structures formed in the second surface, the plurality of optical structures being arranged on the second surface in a predetermined pattern, and wherein each optical structure has at least one characteristic selected from the group consisting of an amplitude, a period and an aspect ratio, and wherein the characteristic has a first value for a first predetermined location on the second surface between the first edge and the second edge and the characteristic has a second value, different from the first value, for a second predetermined location on the second surface, different than the first predetermined location on the second surface, between the first edge and the second edge.